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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/577,181
Filing Date: April 25, 2006
Appellant(s): HARTMANN ET AL.

Karl F. Milde, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 7, 2010 appealing from the Office action mailed June 28, 2010.

(1) Real Party in Interest

The real party in interest is VEKA AG

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claim 1	(rejected)	now being appealed
Claim 2	(rejected)	now being appealed
Claim 3	(canceled)	
Claim 4	(rejected)	now being appealed
Claims 5-20	(canceled)	

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

EP 0303576	BRESSAN	12-1988
5,589,243	DAY	12-1996

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over BRESSAN (EP 0303576) and in further view of DAY (5,589,243).

Regarding claims 1-2, BRESSAN discloses a process for producing a thermoplastics plate comprising at least one smooth edge by:

mixing a thermoplastic in an extruder (Col.4, lines 27-34; Figure 1A);

extruding the plastic using a slot die to give a flat plastics web (Col.4, lines 35-44; Figure 1A and 1B);

cooling and calibrating the plastics web on a calendar roll pair (Col.4, lines 45-51; Figure 1A);

drawing off the plastics web (Col.1, lines 4-15); and

side edge of the plastics web is heated after calibration to at least a melting temperature (Col.2, lines 5-7) wherein heating the side edge of the plastic web is performed by flanges (guide grooves) (see 10 and 10' of Figure 6) of the thermoforming device (6) (smoothing device) (Col.5, lines 24-27) to soften and close the side edges of the sheet (Col.5, lines 32-33; 36-39) (pressing the contact surface of the smoothing device against the side edge to smooth and densify the thermoplastic synthetic material) while the adjacent peripheral surface areas are maintained at a temperature below the softening point by cooling (Col.4, line 59 through Col.5, line 18).

BRESSAN does not explicitly disclose that the said thermoplastic comprises a porous core. However, DAY discloses that panel applications are commonly made from plastic extruded porous foam cores such as polyvinyl chloride (PVC) formulations (Col.1, lines 63-66 and Col.2, lines 33-36). DAY discloses that a problem of fraying

occurs along the longitudinal edges of the web after the said plastic porous foam is cut (Col.7, lines 60-61). It would have been obvious to one of ordinary skill in the art to have substituted the plastic porous foam as taught by DAY for the thermoplastic material of BRESSAN for the predictable results of manufacturing a thermoplastic foam board having a coarsely porous core and to seal and smooth the fray edges of the said plastic porous foam web.

Regarding claim 4, BRESSAN discloses longitudinally cutting the sides of the plastic web along the edges prior to heating the side edges (Col.2, lines 35-48).

(10) Response to Argument

Appellant's argument essentially alleges that the Examiner has not established a prima facie case of obviousness because the references fail to teach or suggest each and every limitation of the claims. The examiner disagrees with the argument and submits that a prima facie case of obviousness has been properly set forth.

Appellant argues:

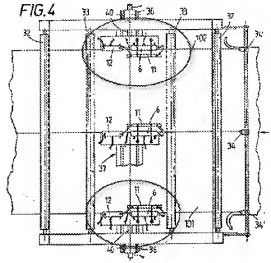
a) BRESSAN does not teach or suggest any process which densifies or smoothes any surface of the exposed core in its process. Appellant further argues that while BRESSAN's method does fuse two edges, these are not considered "surfaces". Examiner respectfully disagrees because BRESSAN forms a smooth edge by deflecting the free edges of the regularly arranged surfaces of the extruded structure toward each other and fusing the edges. It is clear that BRESSAN provides that the edge is formed by a deflection and fusion of a spaced pair of surfaces separated by a hollow space,

while the present invention provides that the edge is formed by a densification and smoothing of the edge of a foam core board, without collapsing an empty space. The present Claim 1 recites "pressing the contact surface of the smoothing device against the side edge to smooth and densify the thermoplastic synthetic material". BRESSAN clearly discloses a method of producing a thermoplastics plate (thermoplastic board) by heating the side edge of the plastic web performed by flanges (guide grooves) (see 10 and 10' of Figure 6) of the thermoforming device (6) (smoothing device) (Col.5, lines 24-27) to soften and close the side edges of the sheet (Col.5, lines 32-33; 36-39) while the adjacent peripheral surface areas are maintained at a temperature below the softening point by cooling (Col.4, line 59 through Col.5, line 18). The said edges are clearly surfaces to be fused which inherently smooths and densifies the thermoplastic material and are described in Col.5, lines 16-28 and Figures 4 and 6 of BRESSAN:

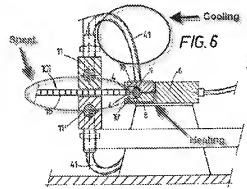
"Sheet 1 is then passed about first deflecting rollers 32. The two halves 101, 102 of sheet 1 longitudinally cut by blade 34 are conveyed upwards and downwards, respectively, and passed about second deflecting rollers 33. Afterwards the **cut edges of sheet 101, 102 are each subjected to a thermal action by assembly 6 which through electrical resistance 8 protected by insulator 9 produces heat which is irradiated through flanges 10 and 10' and softens edges 4 and 4' of sheet 1 guided between skids 11 and 11' in which cooling water fed through conduits 41 is circulated.** Each sheet 101, 102 is then passed along forming an assembly 12, better shown in Fig.7, which by means of its shaped sections 13 and 13' joins by

contact softened edges 4 and 4', thus closing the side edge of each alveolate sheet 101, 102."

Figure 4 illustrates assembly 12 in connection with assembly 6 see below:



Furthermore, Figure 6 illustrates that heating 8 and cooling 41 are performed simultaneously to heat and cool the edge of the sheet 4, 4' while smoothening the cut edges and sealing by the connected assembly 12. See below:



Therefore, BRESSAN does teach pressing the contact surface of the smoothing device against the side edge to smooth and densify the thermoplastic

synthetic material while simultaneously maintaining adjacent peripheral surface areas of the plastic web in the smoothing device at a temperature below the softening temperature of the thermoplastic synthetic material by cooling.

b) BRESSAN does not teach a foam core structure. Examiner agrees that BRESSAN does not teach a foam core structure. However, DAY discloses that panel applications are commonly made from plastic extruded porous foam cores such as polyvinyl chloride (PVC) formulations (Col.1, lines 63-66 and Col.2, lines 33-36). DAY discloses that a problem of fraying occurs along the longitudinal edges of the web after the said plastic porous foam is cut (Col.7, lines 60-61). It would have been obvious to one of ordinary skill in the art to have substituted the plastic porous foam as taught by DAY for the thermoplastic material of BRESSAN for the predictable results of manufacturing a thermoplastic foam board having a coarsely porous core and to seal and smooth the fray edges of the said plastic porous foam web. Appellant argues that if one were to apply the method of BRESSAN to the sheet of DAY the result would be quite different to that of the present invention because BRESSAN seeks to bridge the surfaces of the parallel sheets into a curved edge while the present invention smoothes and densifies the edge without disrupting the foam core and sheet dimensionality. Examiner disagrees because BRESSAN does not specifically teach bridging the surfaces of the sheets into a curved edge. Even if BRESSAN did teach a curved edge, it would not disrupt the main body of the sheet or foam core because the smoothing device is used over the edge only and therefore, combining BRESSAN with DAY would not result in a different invention to that of the claimed invention.

c) In order to employ DAY in the process of BRESSAN, the core of the DAY board would have to be hollowed out. Examiner disagrees because both said plastic sheets of BRESSAN and DAY comprises a porous core with DAY's porous core being foamed being the only difference. BRESSAN specifically teaches a thermoforming device (6) (smoothing device) (Col.5, lines 24-27) that is used to soften and close cut side edges of a plastic sheet (Col.5, lines 32-33; 36-39) and DAY discloses a need to close the frayed longitudinal edges of the plastic web after the said plastic porous foam is cut (Col.7, lines 60-61). Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the plastic porous foam as taught by DAY for the thermoplastic material of BRESSAN for the predictable results of manufacturing a thermoplastic foam board having a coarsely porous core and to seal and smooth the fray edges of the said plastic porous foam web. Furthermore, DAY's board does not have to be hollowed out in order for the frayed edges to be smoothened and closed by the said smoothing device of BRESSAN.

d) While DAY does disclose thermo-formable foam boards, these boards are sandwiched together with the absorptive fibrous web sheets to form laminated boards which are not integral. Examiner disagrees because the definition of "integral" is something that is formed as a unit with another part. In this case, DAY discloses that panel applications are commonly made from plastic extruded porous foam cores such as polyvinyl chloride (PVC) formulations (Col.1, lines 63-66 and Col.2, lines 33-36) and it is integral with the absorptive fibrous web. BRESSAN discloses a method of thermoforming semifinished plastic products. DAY teach that plastic foam cores such

as polyvinyl chloride (PVC) are used to form sandwich panels (Col.2, lines 34-37) and that panel applications are commonly made from plastic extruded porous foam cores such as polyvinyl chloride (PVC) formulations (Col.1, lines 63-66). The fibrous sheets 42 of DAY are attached to such foam boards made of PVC and together are cut. Such cutting produces frayed edges. DAY discloses that such fraying action is extensive for fibrous webs which have been attached to the foam board (i.e. such as PVC foam core) by means which maintain their fibers in a substantially dry and porous state (Col.7, lines 65-67 through Col.8, lines 1-2). BRESSAN's method can be used on plastic materials that are thermoformable. DAY teach a thermoformable plastic foam core material such as polyvinyl chloride that is used in forming panel applications or plastic products and discloses a need to seal and smoothen the edges of a foam board that is made in integral with fibrous sheets. Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the plastic porous foam as taught by DAY for the thermoplastic material of BRESSAN for the predictable results of manufacturing a thermoplastic foam board having a coarsely porous core and to seal and smooth the fray edges of the said plastic porous foam web.

e) BRESSAN fails to teach or suggest "cooling and calibrating the plastic web on a calendar roll pair to form sealed and smoothed side surfaces". Examiner disagrees because Figure 1A shows cooling the plastic web on calendar roll pair (23, 24) and correctly aligning (calibrating) the side edges prior to closing it by the thermoforming assembly (smoothing device) or pressing the contact surface of the smoothing device against the edge described in Col.4, lines 45-51.

f) BRESSAN fails to teach or suggest "drawing off the plastic web". Examiner disagrees because BRESSAN teach in Col.5, lines 16-28 and Figures 4 and 6 that sheet 1 is then passed about first deflecting rollers 32. The two halves 101, 102 of sheet 1 longitudinally cut by blade 34 are conveyed (drawn) upwards and downwards, respectively, and passed about second deflecting rollers 33 prior to heating the side edge of the plastic web.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Stella Yi/

Examiner, Art Unit 1742

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1742

Conferees:

Christina Johnson/caj/

/Benjamin L. Utech/

Primary Examiner